



The International Treaty
ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE



Research Study 7

**Summary of user opinions,
following interviews with members of the seed industry**

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Introduction

1. Study 1 is one of four studies that the Governing Body requested the Secretariat to prepare, in support of the *Ad Hoc* Open-ended Working Group to Enhance the Functioning of the Multilateral System (“the Working Group”). It evaluates the potential of possible revisions to SMTA Articles 6.7 and 6.11 to ensure sustainable and predictable income to the Benefit-sharing Fund. Its findings are brought together in the report, *Estimating income to be expected from possible changes in the provisions governing the functioning of the Multilateral System*.¹
2. In preparation of Study 1, expert representatives from the seed industry were interviewed, in order to improve understanding of user preferences and behaviour informing the economic analysis central to the study. The expert consultation was aimed at gaining a better understanding of how and why users of plant genetic resources for food and agriculture in the seed industry decide to access, or not, materials under the Multilateral System, in order to shed light on the circumstances under which a user is willing to sign an SMTA. Such understanding is necessary to inform the deliberations regarding changes to the Multilateral System that would further increase the willingness of users to contribute to the system.
3. The consultation also supported an exercise aimed at simulating user decision-making in a variety of scenarios. Results of this exercise are published in the report, *Investigation of the preferences and behaviour of users of the SMTA, when making decisions to use the alternative payment options of Articles 6.7 and 6.11 of the SMTA*.²
4. In the interviews, changes to the SMTA currently under consideration by the Working Group were discussed and evaluated from an industry point of view. A better understanding of the transaction costs arising in the process of acquiring and using plant genetic resources for food and agriculture, and in complying with the relevant legislation, was also sought, again with a view to understand industry decision-making and willingness to engage in the Multilateral System. To this end, interviewees were asked to respond to the document *Analysis of the transaction costs occurring for the user, under the SMTA of the International Treaty on Plant Genetic Resources for Food and Agriculture, and the EU Regulation on Implementation of the Nagoya Protocol*.³
5. Fifteen interviews were held – with a total of 18 respondents from 12 companies and three industry associations. Nine interviews were held with respondents from European organisations, four interviews with respondents from U.S. American organisations, one interview with a respondent from Canada and one with respondents from a European-Asian company. Respondents were chosen from companies and associations representing companies that are likely candidates for making payments to the Benefit-sharing Fund

1 Available at <http://www.planttreaty.org/content/background-study-paper-1>

2 Available at <http://www.planttreaty.org/content/background-study-paper-1>

3 Available at <http://www.planttreaty.org/content/background-study-paper-1>

(developed country, large or medium-sized enterprises) based on individual availability in the very limited study time frame.⁴

6. It is important to note that even though respondents were asked to answer questions in their personal capacity and not from a company policy point of view, in practice this was difficult, as of course personal views on this matter are based on professional experience within an individual corporate setting. However, these corporate priorities need of course to be taken into consideration if enhancements to the Multilateral System are meant to elicit contributions from the private sector.
7. Nonetheless, overall willingness to participate in discussions to improve the functioning of the Multilateral System was high and support for the Treaty was frequently explicitly stated.
8. The remainder of this document summarizes, without individual attribution, the main options expressed during the interviews. A wide range of opinions were forthcoming, and an attempt has been made to capture them all, even though this may have led to occasional contradictions.

⁴ The interview protocol is available at: <http://www.planttreaty.org/sites/default/files/Annex%20D.pdf>

The importance of access to plant genetic resources for food and agriculture in plant breeding

9. The Treaty provides, *inter alia*, facilitated access to plant genetic resources for food and agriculture of a selected number of crops through its Multilateral System. Users of the Multilateral System are predominantly plant breeders in the public and private sectors. While plant genetic resources remain an important “raw material” for plant breeders, it was pointed out during the interviews that the need to access such materials varies significantly between companies and crops.
10. Larger companies are often able to rely on their in-house repositories (private germplasm collections), and will need access to external materials only very infrequently, often in relation to the need for a particular resistance or tolerance trait. They might, however, access materials to enhance their own collections with a view to building a longer term strategic advantage, even without immediate need for such material. Smaller companies, with limited collections, need access to external materials more regularly, often for immediate use in their ongoing breeding programmes.
11. Breeding programmes involving transgenic biotechnology require less access, if any, to germplasm from external sources; it involves the transfer of genes, often from other organisms (e.g. bacteria), to existing plant varieties. While these latter plant varieties have been developed using conventional breeding techniques, and may hence incorporate materials accessed from external sources, companies working on the genetic modification of germplasm are generally less likely to require access to external materials.
12. Due to fast-changing market demands in vegetable seed, with the particular qualities sought by the consumer changing annually, vegetable breeding is characterized by fast innovation. This implies a higher, more frequent need to access new materials by vegetable breeders.
13. Generally, commercial breeders can continue for decades producing new varieties from their own, in-house elite lines. When access to new germplasm is needed, competitors’ materials are usually the preferred source. This is so for a variety of reasons, amongst which the fact that commercial lines have very few undesired traits (as these have already been bred out by the competitor) which makes the material easier to work with. Moreover, it seems that the conditions under which competitor’s materials can be accessed are the most acceptable to companies. Common commercial practice requires a fee upon access and royalties in case the accessed material contributes 50% or 25% on pedigree to a new variety (i.e. is one of the parents or grandparents). This is seen as “fair” and “predictable”.
14. Other attractive sources of new germplasm are public genebanks with high quality collections and simple access conditions, without royalty or benefit-sharing requirements (e.g. USDA). However, many of the accessions available in genebanks, such as landraces or wild relatives of cultivars, are often overestimated in terms of their importance to breeding programmes. They often require many years of “pre-breeding” work in order to breed out “undesirable” traits. Moreover, such germplasm is often only locally adapted to very particular environmental conditions. As much of contemporary commercial plant breeding

is aimed at developing products for markets spreading over different geographic areas and latitudes, breeders will be looking for germplasm with wide adaptability.

15. "Elite lines" are currently only available from competitors, and in certain cases from CGIAR Centres, which regularly engage in breeding efforts themselves. It is access to such elite, or "already improved" germplasm that holds the greatest interest for plant breeders.
16. It was pointed out repeatedly that "public material" which is "available to everyone" was simply not as commercially interesting as "unique" or "exclusive" material. This was often raised as a reason for avoiding materials from the Multilateral System. However, it was noted that "UPOV materials" (varieties under PVP, accessed via the breeders' exemption), which were often presented as more attractive materials, are similarly "non-exclusive".

Factors determining the decision to access particular materials

17. It was repeatedly insisted upon during the interviews that the decision of whether or not to acquire a particular genetic material is always made on a case-by-case basis. This, like any other commercial decision, is one of weighing the costs (of access) against the benefits (of the material accessed). The key questions are:
 - (a) Do we need this material?
 - (b) What are the conditions of access (of the Material Transfer Agreement)?
 - (c) Is the material available elsewhere under better conditions?
18. As explained in the previous section, the need for the material depends on the particular breeding programme, and the specific challenges the programme faces, making each case unique.
19. The conditions of the Material Transfer Agreement, under which germplasm is transferred between parties, strongly influence the decision as to whether or not to access any given material. This refers in particular to payments, royalties or benefit-sharing obligations, implications for the company's freedom to operate, including implications for intellectual property protection, and associated administrative or technical procedures, such as tracking and tracing of materials throughout breeding programmes.
20. The legal certainty that any particular agreement confers also strongly influences the decision of whether or not to access any given material, with the majority of respondents stating that legal uncertainty was less tolerable than high costs (e.g. benefit-sharing obligations) associated with access.
21. Material needed will always be accessed from the source providing easiest access under the best conditions. Most of the time, this is said to be competitors' varieties or materials from certain, "easy access" national germplasm repositories. While respondents often used the plural form when referring to such national genebanks, the only one actually named was the USDA genebank.
22. The availability of good information on the material, of "passport data", or characterization and evaluation data, was cited as important. This is mostly because such data makes the material more visible and/or searchable and can therefore facilitate the search and decision-making. The potential benefit of investigating large, uncharacterised collections in search of interesting material does not often warrant the associated effort and cost. The structure and organisation of the germplasm collection hence plays a key role in promoting access, especially for smaller companies without resources to investigate large, uncharacterized collections.
23. The Phytosanitary condition of the germplasm collection – and the germination rates of the germplasm accessed – also play a role in choosing a source. However, this is unlikely to prevent a user from obtaining an accession that is very interesting in other ways. Such factors may nonetheless contribute to the reputation of an entire collection and turn users away from even considering accessions from that collection in the first place. This point was repeatedly made during discussions of the collections that are effectively accessible

under the Multilateral System, implying the questionable quality of some public genebanks.

24. Some companies, especially European ones commercializing their varieties under PVP, have so far been very willing to access materials from the Multilateral System under an SMTA. Other companies have occasionally done so, or would occasionally do so if the need for the particular material was high – e.g. if a disease resistance trait was required for an ongoing breeding programme. This willingness is likely to change if PVP-protected products incorporating material accessed under an SMTA now require mandatory benefit-sharing, unless payment rates and other aspects of the Multilateral System changed in favourable ways (i.e. lower payment rates, temporal limit on obligations, more or all crops available in the system, actual rather than theoretical availability of the resources held by Contracting Parties).

Impact of other regulatory frameworks on industry decision-making

25. During the interviews, access to plant genetic resources under different regulatory frameworks was also discussed, with reference to the Treaty on the one hand, and the Convention on Biological Diversity (CBD) and its Nagoya Protocol on Access and Benefit-sharing on the other. In summary, the implementation of the Nagoya Protocol is perceived as potentially deleterious to plant breeding by imposing a heavy regulatory burden, threatening to complicate access to genetic resources and increase associated costs in severe ways. Yet, while virtually all respondents stressed their support for the Treaty and its objectives, the Multilateral System, and especially its SMTA, are viewed as flawed and in need of improvement.
26. Many companies have experience with accessing external germplasm through bilateral contracts involving Prior Informed Consent, such as is required under the CBD, and as will be increasingly regulated with the Nagoya Protocol having come into force on October 12, 2014. Larger companies, with competent, in-house legal staff, declare that bilateral contracts are often preferable to signing the SMTA, as the terms and conditions of such agreements can be negotiated to their favour.
27. However, the majority of respondents stated clearly that Access and Benefit-sharing under the CBD is not designed for plant breeding, but rather based on a model of bioprospecting in the pharmaceutical sector. In the latter, a single sample may prove to contain a synthesizable, patentable chemical, which may be the basis for large profits. This situation differs greatly from plant breeding, where the raw materials are of very low value and where substantial value added through research and breeding builds up only late in the process, once a wide range of materials have been combined and repeated selections made.
28. There is much apprehension regarding the regulatory burden for the seed industry that is likely to result from legislation for the implementation of the Nagoya Protocol, at national and regional level, even for breeders who are not using any materials accessed in accordance with CBD provisions. Many fear that this legislation will lead to increased complications in accessing plant genetic resources for food and agriculture and thereby also to a narrowing of the resource base used in plant breeding. It was suggested that the consequences of such a narrowing on agricultural genetic diversity and food security may be detrimental.
29. Additionally, many respondents believed that the increasing regulatory burden would favour larger companies, with substantial legal departments, to the detriment of smaller companies, and drive the whole industry towards horizontal and vertical consolidation, with the risk of monopolies developing.
30. Legal uncertainties arising from the Nagoya Protocol implementation (as implemented in the recent European Union Regulation⁵) are especially worrying to members of the plant

5 The *European Union Regulation on Compliance Measures for Users from the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization in the Union*, EU No 511/2014, adopted on 16 April 2014, available at <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014R0511> is the only such implementing regulation to date, and was therefore taken as a model, for the analysis

breeding sector, as such uncertainties create unknown costs, and constitute an unacceptable risk. On the spot checks of material records and certificates, as well as a heavy bureaucratic load for market approval of new plant varieties, are regarded with particular apprehension.

31. Respondents stressed that crossing materials under SMTA conditions with materials under bilaterally agreed terms, that is, working with both sets of materials in the same breeding programme, could lead to very complex legal and administrative situations with multiple or even conflicting obligations regarding benefit-sharing payments and transfer to subsequent users. Commercial breeders would, whenever possible, avoid such situations.
32. Most interviewees did not believe that breeders would abandon crops, but would continue to breed with their own materials, and those available from competitors on commercial terms, or from the market, under the breeder's exemption in the UPOV Convention. But the constriction of access to crop genetic resources would lead to slower and less effective breeding, to the detriment of food security, and to genetic erosion. The crops most likely to suffer would be minor and underutilized crops of particular importance to food security in developing countries.
33. Some respondents told of past, or still ongoing, fruitless efforts to gain access through bilateral contracts to certain plant genetic resources in developing countries. The applicable regulations in many countries are unclear even to local officials, something which can stall export of materials, including in countries which are Contracting Parties to the Treaty. It is hence possible that the question of *where the material is located* (in which country, or international institution) is a bigger determining factor of the decision of whether or not to access a particular material than *whether it is available under an SMTA, or under a bilateral MTA*.
34. The suggestion that the SMTA, especially a subscription to Article 6.11, should be accepted as an "Internationally Recognized Certificate of Compliance" and prove *due diligence* under the Nagoya Protocol, was considered and found promising. Many thought that this would relieve the worst uncertainties of working under both regulatory frameworks on access and benefit sharing. However, some respondents pointed out that this would not provide relief to all companies: for those that continued to include materials subject to the Nagoya Protocol in their breeding programmes, costs and uncertainties would remain high nonetheless.

How potential changes to the Multilateral System might affect industry decision-making

35. In order to enhance the Multilateral System, increase user-based payments and contributions to the Benefit-sharing Fund in a sustainable and predictable long-term manner, several revisions to the SMTA are currently under consideration by the Working Group. These were discussed during interviews with members of the seed industry, with the basic framework for such changes being that described in IT/OWG-EFMLS-1/14/3, *Background on the Work Undertaken by the Ad Hoc Advisory Committee on the Funding Strategy, and its Further Development*.⁶
36. The potential expansion of the Treaty's crop coverage, while only to be considered in a second phase by the Working Group, was also broached in order to better understand the potential implications of such an expansion on user willingness to contribute to the Multilateral System.
37. Being a standardised agreement, the SMTA was praised several times during the interviews for being non-discriminatory and creating an equal playing field. Respondents insisted that any changes to the SMTA ought to reinforce this characteristic.

Revisions to SMTA Article 6.7

38. Currently, the SMTA provides for payment if a new plant variety developed by incorporation of the germplasm received is not freely available to others for further research and breeding, such as would be the case if the variety were commercialized under patent protection. In a revised Article 6.7, other kinds of products might attract benefit-sharing obligations. It is very clear from the interviews that, to be acceptable and affordable to the industry, an extension of payment obligations to, for example, products protected by PVP would have to occur at a significantly lower rate than the mandatory payment rate for patented products.
39. It was generally felt that extending payment obligations to PVP would "penalise" this form of intellectual property protection and consequently undermine UPOV. Such an extension was thought to display a disregard for the breeders' exemption, which some interviewees understood as constituting a core element of Treaty philosophy. It was pointed out that "penalising" PVP in this way would create an incentive for companies to avoid PVP, and intellectual property protection entirely, and instead only rely on the technical protection of hybrid varieties – that is, the loss of hybrid vigour in saved seeds.
40. Making all products pay, whether or not they are available for further research and breeding, might potentially be more acceptable, as it was felt that this would avoid singling out and "penalising" PVP, but rather create a more level playing field, covering all classes of product. However, most interviewees agreed that products should attract payments at different rates, depending on their restriction levels with regard to further research and

6 The document is available on http://www.planttreaty.org/sites/default/files/OEWG-EFMLS_1-14-w3_en.pdf

breeding. The suggestion was put forward to have a flat rate for all products regardless of restriction level, but include a kind of “penalty rate” for patents.

41. It was also suggested that payment rates should differ according to company size and/or type of institution, with small companies and not-for-profit research institutes possibly exempt from payments. Payment rates also ought to differ according to crop – as profit margins vary widely between crops, and lower margin crops are unable to sustain high payment rates.
42. A *de minimis* clause (payment being triggered by a certain percentage of contribution on pedigree, of material under SMTA conditions, to a new plant variety), as well as a temporal time limit or “get out” clause were underlined as crucial factors in increasing willingness to use the SMTA. It was pointed out that some companies had explicit policies that no employee is to sign any contract with conditions lasting over 20 or 25 years, making it impossible for some breeders to sign the SMTA, even if there was personal willingness and/or the material was highly desirable.
43. Interviewees expressed the opinion that the SMTA did not reflect normal commercial practice. A specific problem that was frequently raised was the fact that payment obligations devolve upon the enterprise commercializing the final product, whereas, in many cases, these companies are no more than multipliers of seed, who pay a royalty to the breeder, and have no understanding of, or interest in, questions of access and benefit-sharing. Seed breeders feel that, in real market situations, they are unable to negotiate royalty contracts with these companies, if they also have to impose the SMTA.
44. Furthermore, industry members regarded the need to report in detail on seed sales, in order to determine payment obligations under the SMTA, as very problematic. Such information is viewed as commercially highly sensitive, and mechanisms would have to be in place, as well as properly understood by users of the Multilateral System, which allowed reporting of this information in an absolutely confidential way. Several respondents expressed distrust in the existing mechanisms.

Revisions to SMTA Article 6.11

45. Revisions to SMTA Article 6.11 currently under consideration could include varying levels of payments for different categories of products, according to the intellectual property protection under which they are commercialized. Payment would then be required for all of a breeder or seed company’s products of the crop or crops in question, but at different rates for different categories of products. A revised Article 6.11 payment option would moreover eliminate the requirement to record crossings in the breeding pools of subscribers to the option. As subscribers to this option pay on all their products, whether or not they derive from material received under an SMTA, no tracking of any of their breeding materials would be required by the Treaty.
46. The relationship of payment levels under the two payment options, SMTA Article 6.7 and Article 6.11, are currently such that the former drives out the latter. Lowering the current rate of 0.5% in Article 6.11 (for all categories of products) would hence be fundamental in making the Article 6.11 payment option more attractive to users. Differentiated rates (according to restriction level, but also company size, and crop) seem to be important for increasing acceptance of the SMTA in general, and the Article 6.11 option in particular.

However, an acceptable alternative version to many respondents would be a flat rate for all products with a “penalty” for patents – in such a case, small companies and not-for profit institutes could be exempt from payment.

47. Views with regard to making Article 6.11 the sole payment option varied. Some companies were very reluctant to give up on Article 6.7, whereas others proved keen to simplify the whole system through a single option and simple “subscription”. It was cautioned that revising the SMTA in such a way that the conditions of Article 6.7 were a deterrent could “backfire” by “creating upset” amongst Article 6.7 users, reducing their willingness to participate in the Multilateral System. However, it was also felt that to eliminate Article 6.7 entirely, and continue with just one payment option (with different rates for different products and users) would reinforce the SMTA’s capacity to create a “level playing field”.
48. Opinions also varied widely with regard to the transaction costs imposed by the Treaty due to the need of tracking and tracing crossing throughout breeding programmes. Some respondents noted that any reputable breeder would always have to track and trace materials in any case, and that flagging them as SMTA materials required nothing more than a tick in a box. Other respondents insisted that these requirements constitute a high administrative burden, implying that such systems are only necessary for tracking obligations under the Multilateral System or the Nagoya Protocol, and pointing out that electronic tracking systems can cost “in the millions”.
49. Whichever way, the reduction of transaction costs through elimination of the need to track and trace crossings throughout breeding programmes was generally seen as a particular attraction of a revised Article 6.11. However, such elimination would be valueless, if Nagoya Protocol implementation regulations were to overrule the Treaty, and create a separate additional burden. It was felt that the burden of proof of non-use of material received under a CBD use-license should not be imposed upon users of the Treaty’s systems, in particular in the context of a revised Article 6.11. It was hence considered crucial that the SMTA be accepted as the “Internationally Recognized Certificate of Compliance” for all products of subscribers to Article 6.11. Moreover, it was felt that an accompanying declaration of non-use of materials accessed under a CBD type contract should fully suffice for the market approval of new plant varieties of subscribers to the Article 6.11 option.
50. It was suggested that the contractual period of the Article 6.11 payment option be reconsidered, and reduced from the current 10 years. Relatedly, the exact terms under which one was able to “opt out” of Article 6.11, including the conditions of any “cooling off” period, would have to be clarified and improved.
51. During discussions, the current provisions for the transfer of SMTA conditions to subsequent users of the material, or of any material “under development”, by users of Article 6.11, came up as a matter of particular contention. In this context, the question was raised whether the passing on of Article 6.11 terms and conditions was always necessary, or whether subsequent users could not opt for Article 6.7 if so desired.
52. Opinions regarding any additional “privileges” for 6.11 club members, over and above reduced transaction costs and increased legal certainty, were divided. Participation by industry in priority-setting for the Benefit-sharing Fund was generally viewed as an important aspect of enhancing the Multilateral System. Some respondents thought,

however, that this should not be a privilege for Article 6.11 subscribers only, but that advice from all industry, regardless of choice of payment option, should be sought for such priority-setting. One respondent pointed out that if industry were to be consulted on this issue, big companies would be likely to set the agenda in this regard, and that hence it was best to leave these decisions to experts other than to companies.

53. While the SMTA was generally seen as a suitable tool for access to germplasm, most respondents agreed that, with a well-thought through “subscription system”, the SMTA could possibly be eliminated – for example, first ever access of material under the Multilateral System could register the user in the system and payment obligations would apply from thereon.

Expansion of the Treaty’s crop coverage

54. Industry respondents thought that *Annex 1* would have to cover all plant genetic resources for food and agriculture, for all uses, including industrial, in order for the system as a whole to be coherent and meaningful, especially in view of the implementation of the Nagoya Protocol to the CBD.
55. It was pointed out that as long as some companies would be forced to use bilateral MTAs for some of their crops (because they would not be covered by *Annex 1*, and only be available under the CBD), complications of working under both regulatory frameworks would remain and could lead to some companies deciding to avoid the Multilateral System altogether. Consequently, if enough effort were put into making the Nagoya implementing regulations workable for breeding companies, the Treaty could easily become obsolete.

Other issues affecting industry decision-making

56. It was repeatedly said during interviews that a majority of Contracting Parties were not complying with their Treaty obligations, especially with regard to making their collections of *Annex 1* germplasm available under the Multilateral System. This was the primary reason for considering the Multilateral System, while theoretically valuable in facilitating access to germplasm and regulating the sharing of benefits arising from its use, currently ineffective.
57. Interviews revealed the common opinion among seed breeders and seed companies that putting the entire cost of benefit-sharing for access to plant genetic resources for food and agriculture on the seed industry is not equitable. Respondents noted that the benefits of access are reaped not only by seed breeders, but also by farmers, the food and feed processing industry, retailers and ultimately by consumers. The seed industry would be more willing to contribute to the Benefit-sharing Fund, if other beneficiaries also did, and if Contracting Parties also contributed, in a balanced way.
58. Innovative collaborations between Contracting Parties and the seed industry operating in their territories might hold the greatest promise for generating acceptable levels of income for the Benefit-sharing Fund, in a sustainable and predictable manner. A general preference for each Contracting Party being free to decide how to raise the funds was displayed in the interviews. It was reported that in one country, the possibility of a burden-sharing mechanism is currently being discussed between industry and government.
59. The projects hitherto financed by the Benefit-sharing Fund were regarded by interviewees as largely uninteresting. It was suggested that if projects focussed more directly on developing a seed sector or improving plant breeding in developing countries, that is, on projects that serve the seed industry globally, the willingness to use and contribute to the Multilateral System would be improved.

Conclusions: Benefit-sharing as part of a wider cost-benefit analysis

60. One clear and universal opinion was that the decision of whether or not to acquire a particular genetic material is always made on a case-by-case basis. Like any other economic decision, it is based on weighing the costs (of access, and subsequent benefit-sharing) against the benefits (of the material accessed, and of legal provisions certainty). Benefit-sharing obligations, in a commercial context, figure as costs in a wider cost-benefit analysis, and may lead a user to seek access to alternative genetic materials elsewhere. In the case of Treaty materials, the same or similar materials are often available elsewhere.
61. The need to access plant genetic resources for food and agriculture varies significantly between companies and crops. Smaller companies, with limited in-house collections, need to access new germplasm more regularly than larger companies. Smaller companies are unlikely to seek raw, unimproved materials, which only larger companies have the resources to exploit. The use of transgenics in breeding programmes reduces the need to access germplasm, because the focus is on introducing cross-species genes into existing varieties. Vegetable breeders require new materials more frequently, due to the nature of the vegetable seed market, but most of their crops are not included in *Annex 1*. This implies that the majority of private sector users of the Multilateral System are likely to be smaller or medium-sized companies working on crops with a limited profit-margin. Under the current structure of the Multilateral System, the majority of payments to the Benefit-sharing Fund are therefore expected from the companies least well-placed to make them.
62. In many cases, commercial breeders can produce new varieties using their own, in-house elite lines only, and, when new germplasm is needed, it will always be sought from the source providing easiest access under the best conditions. Competitors' materials are usually the preferred source, followed by materials from certain efficient and well-documented national germplasm repositories.
63. The particular conditions of the Material Transfer Agreement, under which germplasm is being exchanged, are an important factor in deciding which materials to access, as they will determine many of the costs associated involved: payments, royalties or benefit-sharing obligations, restrictions on further use, implications for intellectual property protection, and associated administrative or technical requirements.
64. Elite, pre-bred, or improved germplasm holds the greatest interest for plant breeders. The use of the Multilateral System will depend on the availability of such germplasm in the system. Through their pre-breeding efforts, the CGIAR Centres contribute special value to the system, and all their releases, including of improved materials, are under SMTAs.
65. The availability of information about the materials, and the overall structure and organisation of the genebank, in particular the documentation of its germplasm, plays a key role in promoting access, as for most users, the potential benefit of investigating large, uncharacterised collections in search of interesting material does not often warrant the associated effort and cost.
66. Most respondents stressed their support for the Treaty, especially in context of the implementation of the Nagoya Protocol to the CBD, which is perceived as imposing a heavy regulatory burden and increasing costs of access to genetic resources. A particular worry is

that the implementation of the Nagoya Protocol, at national level, places heavy and unjustified burdens even on breeders using no materials accessed under the provisions of the CBD.

67. However, the Multilateral System and its SMTA are viewed as not being adapted to commercial practice, and in need of improvement. Payment rates would need to be lowered and differentiated (according to restriction level, but also company size, and crop) in order to increase acceptance of the SMTA, and the Article 6.11 option in particular.
68. If all Contracting Parties made their germplasm collections fully available, and the Treaty's Access and Benefit-sharing system covered all plant genetic resources for food and agriculture, for all uses, this would constitute a coherent and meaningful framework to the Access and Benefit-sharing regime for plant breeding, in harmony with the CBD. For this to be effective, and be fully supported by the seed industry, it was felt the SMTA must accepted as the "Internationally Recognized Certificate of Compliance", as provided for in the Nagoya Protocol, for all products of subscribers to an improved Article 6.11. Moreover, the burden of proof of use or non-use of Nagoya materials should not fall on the plant breeders, and an accompanying declaration of non-use of materials accessed under a CBD type contract should fully suffice for the market approval of new plant varieties of subscribers to an improved Article 6.11 option.
69. As the seed industry would be more willing to contribute to the Benefit-sharing Fund, if other beneficiaries also did, innovative collaborations between Contracting Parties and their private sectors might hold the greatest promise for generating acceptable levels of income for the Benefit-sharing Fund, in a sustainable and predictable manner.
70. To conclude, it is felt that if the funds for achieving such public goods as conservation of genetic resources and food security are to be contributed by the private sector, the ways and means of achieving these goods need to be in line with the objectives of industry. Alternatively, either loopholes have to be eradicated and payments effectively enforced, or other sources of funding have to be enlisted in pursuit of these goods.